

17 February 1997

MEMORANDUM TO: DIRECTOR OF ENGINEERING AND TECHNICAL SERVICES, SOUTH  
PACIFIC DIVISION

SUBJECT: Description of Phase 4 Studies for Long-Term Investigation of the Flood  
Control System

1. The Phase 4 component of our flood recovery program has been divided into four separate, but linked components. These components and the estimated cost for each of these elements are described below. These components and the estimated cost were developed in cooperation with Sacramento District, the California Department of Water Resources, and the California State Reclamation Board.

- a. Small Communities Flood Assessment: This element involves an overall assessment of the flood risk and possible qualitative solutions to the flood risk for all small communities located in the Central Valley of California, the North Coast Region of California, and the Truckee, Carson, and Walker drainages in Nevada. Tailored after the Arizona flood assessment that was undertaken after the 1993 floods in Arizona, the objective of this component of the study is to get Corps officials to all communities affected by the floods within the next 6 months to assess with local officials the flood risk that exists and to offer technical assistance on possible solutions. The total cost estimate for this component of Phase 4 is estimated at \$750,000 and is divided as follows:

- 1) Central Valley of California - \$400,000
- 2) Northern Nevada - \$150,000
- 3) North Coast of California - \$200,000

The schedule would call for completing this assessment and preparing the three reports within 12 months. The three separate studies would be done at 100% Federal cost.

- b. Umbrella Strategy for the Central Valley of California: This study element involves taking a comprehensive overview of the flood risk in the Central Valley of California and evaluating long-term solutions to the flood risk from a system perspective. Elements addressed would include reallocating existing storage, new storage, developing a flood by-pass system for the San Joaquin River, environmental restoration options that would also provide valley storage, set back levees, upgrading existing levees, etc. This study component will be more qualitative in nature with the end result being an overall strategy that can lead future planning efforts undertaken by the Corps, the State of California, and other implementing entities. By its nature, this umbrella strategy needs to be completed quickly to direct all future planning efforts being undertaken to address the flood risk in the Central Valley of California. The umbrella strategy needs to be scheduled to be completed within 18 months to two years. In addition to an overall strategy, the outcome of this study component would be requests for specific reconnaissance studies for particular basins within the Central Valley of California. The estimated cost is \$2,100,000 broken down as follows:

- 1) PSP Development - \$100,000 Federal (6 months or less)
- 2) Strategy Assessment - \$2,000,000 cost shared 50/50 (12 months)

- c. Specific Reconnaissance Studies: Out of the Umbrella Strategy, it is assumed that seven reconnaissance studies will be identified which could lead to feasibility studies for specific project authorization. There is little basis for this assumption other than a quick qualitative assessment of opportunities by the Corps and the State. The seven reconnaissance studies, all funded at \$100,000 Federal expense would be completed within six months each.

- d. System Model Development: The fourth component of the Phase 4 investigation involves developing one comprehensive mathematical model for reservoir routing and flood forecasting. The task would involve integrating the modeling efforts of the State of California, the Bureau of Reclamation, and the Corps of Engineers into one comprehensive predictive and water management model. The estimated cost of such a model development is \$2,000,000 to be cost shared 50/50. The estimated time to develop such a model is two years. Funding for the Federal share of the model development would come from the R&D account.
2. The total estimated cost for the Phase 4 investigations is estimated at \$5,550,000. In communication with the Chief's Office (CECW-B), we have indicated that we could accomplish the small communities flood assessment and \$400,000 worth of the umbrella study during FY 97. The total Federal cost of these components is \$1,150,000 and these funds can be obtained from existing GI sources within SPK. Therefore, no funds are currently included in the Supplemental Appropriations Bill to undertake Phase 4. This action is the direct result of CECW-B. Mr. Lancaster has communicated this decision to Mr. Fazio in a recent letter.

/s/

ROB VINING  
Chief, Planning Division